Secure Solid-State Drive (SSD) Solutions for Long Life Cycle Requirements

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Extreme Engineering Solutions, Inc. (X-ES) announces rugged Solid-State Drive (SSD) solutions that are ideally suited for applications requiring long-term availability and a stable supply chain. An important feature of these high-density, high-performance storage products is that they use an FPGA-based storage controller. This directly addresses EOL and Obsolescence issues commonly associated with foreign-designed and manufactured storage controllers, which often are discontinued before a system can go into production.

Security

X-ES's Secure Self-Encrypting SSD (SED) storage solutions come with an extensive list of security features. The use of an FPGA-based controller is integral to these features, enabling support for security capabilities tailored specifically to military, aerospace, and government requirements. These include "always on" NIST-certified AES-256 XTS hardware encryption, hardware-based authentication, and fast clear. Additional military sanitization (zeroization) protocols that meet NSA, NISPOM, and a number of other DoD specifications also are supported. When combined with X-ES SecureCOTS products such as the 4th Gen Intel® Core™ i7-based 3U VPX XPedite7572, specialized Anti-Tamper (AT) capabilities can also be realized.

Performance and Reliability

X-ES's SSD solutions utilize SLC NAND Flash and superior ECC protection to provide industry-leading reliability and performance. These capabilities have been tested under the demanding environmental conditions of MIL-STD-810 and proven during the flight qualification of systems such as the XPand4208. X-ES's SSD products also can be used in the COTS XPand6200 Series system, providing an ideal platform for a rugged, reliable, and SWaP-optimized Network Attached Storage (NAS) solution.

Product Options

For customers using one of X-ES's Intel® Core™ i7 or Freescale QorIQ-based Single Board Computer (SBC) products, X-ES provides the XPort6105 XMC, as well as the forthcoming 3U VPX XPort6174. Both of these SSD modules can provide individually up to 512 GB of raw storage. When mated together, they can provide up to 1 TB of storage in a single 3U VPX slot. The XPort6173 supports two standard 2.5" SSDs and is yet another option for providing up to 1 TB of storage in a single 3U VPX slot.

X-ES also provides the XPort6193, a removable Line Replaceable Module (LRM) capable of supporting up to 1 TB of raw storage. This rugged and compact module utilizes a 2.5" SSD and a highly reliable connector capable of supporting up to 100,000 mating cycles. The XPort6193 is supported in X-ES's XPand4200 and XPand6200 Series systems. Additionally, two XPort6193 modules can be included in a single XPand6902 enclosure. The XPand6902 is a small enclosure that can be added as a removable memory bay extension for other systems, simplifying support for rugged and removable high-density storage within a broad range of military and aerospace platforms.

About X-ES

Extreme Engineering Solutions, Inc. (X-ES), a 100% U.S.A.-based company, designs and manufactures Intel® and Freescale-based single board computers, networking products, storage products, power supplies, and system-level solutions for embedded computing customers. X-ES offers cutting-edge performance and flexibility in design, plus an unparalleled level of customer support and service. For further information on X-ES products or services, please visit our website: www.xes-inc.com/ or call (608) 833-1155.

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